G-5's "Eye on AMC"

U.S. Army Materiel Command

Essential in Peace, Indispensable in War

November 14, 2003

AMC awards Top Ten Greatest Inventions

Gen. Paul J. Kern, AMC commanding general, and Lt. Gen. Richard A. Cody, Deputy Chief of Staff, G-3, recognized AMC's "Top Ten Greatest Inventions" in an awards ceremony yesterday at the Fort Belvoir Officer's Club.

AMC developed the Greatest Inventions program to recognize the Army's best new technology solutions impacting Soldiers. The Army -- from active duty divisions to the Training and Doctrine Command to the Army's Deputy Chief of Staff for Operations and Plans (G-3) -- chose AMC's top ten winning programs for their inventiveness, impact on Army capabilities, and potential benefit outside the Army.

The following inventions were honored:

Automated Biological Agent Testing System, Edgewood Chemical Biological Center, Aberdeen Proving Ground, Md.; **Advanced Chemical-Biological Mask**, Edgewood Chemical Biological Center, Aberdeen Proving Ground, Md.; **Biological Attack Warning System**, Edgewood Chemical Biological Center, Aberdeen Proving Ground, Md.; **Cooling/Heating Body Garment**, Natick Soldier Center, Natick, Mass.; **Interceptor Multiple Threat Body Armor**, Natick Soldier Center, Natick, Mass.; **Modular Integrated Communications Helmet**, Natick Soldier Center, Natick, Mass.; **Agile Commander Advanced Technology Demonstration**, Communications-Electronics Research, Development and Engineering Center, Fort Monmouth, N.J.; **RAVEN (RArefaction waVE guN)**, Armament Research, Development and Engineering Center, Watervliet Arsenal, N.Y.; **BASIC Hornet (XM 93),** Armament Research, Development and Engineering Center, Picatinny Arsenal, N.J.; and the **Full Spectrum Active Protection Close in Layered Shield (Vehicle Defense**), Tank-automotive Research, Development and Engineering Center, Warren, Mich.

RDECOM building dedicated in memory of fallen Soldier

Last week in Orlando, Fla., Maj. Gen. John Doesburg, RDECOM commander, hosted a building dedication ceremony in honor of Sgt. 1st Class Paul Ray Smith, a combat engineer who was killed in action on April 4 at the Baghdad International Airport. The RDECOM facility that was renamed is now the Sgt 1st Class Paul Ray Smith Simulation and Training Technology Center.

Other guest speakers at the ceremony included the Lieutenant Governor of Florida, Toni Jennings; the 3rd Infantry Division ADC(S), Brig. Gen. Jose Riojas; from the Corps of Engineers, Brig. Gen. Randal Castro; the 11th Engineer Battalion Command Sgt. Maj. Gary Coker; and Smith's sister, Lisa DeVane. Smith's son, daughter, widow, mother, father and six other family members were also in attendance.

Smith is being nominated for the Congressional Medal of Honor for his conspicuous gallantry during the battle at the airport. His engineer platoon was setting up an enemy prisoner of war holding area when they were confronted by approximately 100 Republican Guard troops. His platoon was quickly pinned down and was taking injuries from the heavy volume of fire. Smith provided cover so that soldiers could be evacuated from the area and held the enemy troops back and caused them to withdraw by firing more than 400 rounds of ammunition from a disabled armored personnel carrier. Some estimates from witnesses estimate that Smith killed between 30 to 50 Iraqi soldiers, though it was difficult to precisely determine due to the Iraqis removing their fallen troops as soon as they were hit. During the battle, Smith lost his life while saving dozens of his own soldiers and protecting a critical avenue of approach that could have allowed the Republican Guard soldiers to have access to the Task Force Tactical Operations Center.

Picatinny tests first thermobaric small arms munition

Engineers and scientists here have successfully tested the United States' first thermobaric small arms munition, a spokesperson for the Office of the Project Manager for Soldier Weapons announced Nov. 3. Lt. Col. Robert C. Carpenter, product manager for crew served weapons, said the new munition was unveiled at the Army infantry commanders conference, Fort Benning, Ga., during a scheduled demonstration.

"The thermobaric round combines precision airburst technology with thermobaric principles to defeat enemy soldiers," he said.

When the 25mm munition functions, it produces an initial explosion dispersing very fine metal particles that fill the surrounding air. Reacting with oxygen in the atmosphere, these particles self-ignite to create an overpressure.

The overpressure, he said, envelops the surrounding area, attacking a volume of space, and the occupants within that space, which is particularly effective inside buildings and caves.

Carpenter said that the thermobaric round was fired from a XM307 Objective Crew Served Weapon. Like the thermobaric round, the XM307 is under development by a team from PM Soldier Weapons and the Armament Research, Development and Engineering Center.